SUPRACONDYLE AND CONDYLE FRACTURES OF ADULT'S HUMERUS

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The supracondyle and condyle fractures of adult's humerus are relatively often disorders. We studied 57 cases, mainly affecting adult and old people, 49,1 per cent of whom were aged between 50 and 70 years. These fractures were characterized by a dislocation of the fragments due to the constant pulling of muscles and high reactivity of the ankle joint, thus requiring a complex and hard treatment.

The reason for such fractures was usually a compression with a direct influence of forces, a result of falling from a height, transport accidents, pressing by various objects, sport events, blows, winding mechanisms, etc. Male patients were 34, female 23; the right ankle joint was more often affected (32 cases; 56,1 per cent) than the left one (25 cases, 43,9 per cent).

The cases with supracondyle intraarticular fractures were 29 (50,8 per cent) and the condyle ones were 28 (49,2 per cent). The acting forces performed an open fracture of the ankle with 16 cases (28,1 per cent) and 5 cases (8,7 per cent) from them had a combined fracture and joint luxation.

The arterial disorders were usually complications after fracture-dislocations or luxations of the ankle joint. Two of our patients had such complications.

R. Kerin (6) reported his 9 cases with disorders of a. brachialis. According to him it was not necessary, even not required, to restore the brachial vessels because of the excellent collateral circulation. Louis et al. (1974) report 4 cases, complicated by cutting of a. brachialis, however, they recommended to restore the arterial disorders. C. Barill et al. (2) analysed one case with similar complication and suggested operative treatment of such arterial lesions. One of our patients needed a restoring of his a. brachialis.

The nerve disorders as complications with fracture dislocations and luxations of the ankle joints were registered with 3 of our patients. N. medianus, n. ulnaris and n. radialis were affected. Therefore, we recommend a thorough neurological investigation before and after the treatment of the ankle joint. We did primary stitches of those nerve damages. I. Matev (9) reported 2 cases with compressed n. medianus which contributed to a X-ray founding with lowered cortex and severed periostal reaction. P. Fourrier et al. (4) discussed the mechanism leading to an incarceration of n. medianus.

The supracondyle and condyle fractures of adult's humerus had often a polyfragment character which tended to certain problems of reposition and caused adhesive formations hindering the movements of the ankle. The majority of the condyle fractures were T-like and Y-like forms which were dislocated and (or) the proximal fragment entered the ankle joint.

There were combined disorders with fractures of radius in a typical place, of antebrachium, of claviculla, of pelvis, of thorax, of skull, of spinal cord, etc.

Supracondyle and condyle fractures of humerus in adults are serious disorders. Our behaviour was directed mainly towards the joint movement, without special attention to the cosmetic forming of the ankle and excellent reposition of the fragments, especially concerning the supracondyle fractures. The treatment must begin as early as possible, immediately after the trauma.

Manual reposition of only 6 cases (10,5 per cent) from our patients was done; such reposition is usually very hardly realized, even impossible. Plaster immobilization for 4—5 weeks and later active movements were done only after a successful reposition.

Some orthopedicists used the hanging plaster after Caldwell (mainly for the supracondyle fractures of humerus). We also experienced, but our opinion was that this method could be applied with proximal fractures. P. B. Magnuson et al. (8) recommended the indirect extension with pulling of the antebrachium fixed at 90° for a period of 2—3 weeks.

The skeleton extensions were more effective to repose the polyfragment fractures with additional simultaneous movements of ankle and contraction of muscle groups. We applied them with 12 patients (21 per cent). Kirschner needle through the olecranon was inserted. The patient was on his bed while we realized the recommended methods and also pulling of the humerus, or the patient walked and a vertical pulling was done. The pulling force (load) was increased degree-by-degree and as a result of it the fragments' dislocation could be treated properly.

The operative treatment has its supporters and critics. The main point is that it requires excellent surgeons and well organized department to realize the reposition and fixation of the fragments. The operative treatment is discussed with the numerous supracondyle fractures of humerus because there are certain problems of their connection and fixation.

However, the condyle fractures with 2—3 large fragments require only operative treatment. We recommend operations at the age of young individuals, also with poor physical condition of the patients; this method of treatment must be the first step and not the second or third one after some other unsuccessful. The operative treatment must be held 8—12 hours after the trauma when there is no skin induration, no oedema and inflammation in the region of ankle joint. Recently, the operative treatment had more and more supporters (1, 3, 5, 10, 11 etc.). The model of operations tends to realize a total adaptation of joint surfaces and restoring of the ossis of humerus and antebrachium. We recommend two lateral cuts, presuming that the transolecranon way of treatment is unnecessary and harder for the heavy condition of the ankle. N. ulnaris is usually dissected, too. The small bone fragments must be taken out, whereas the large ones must be connected and alined with the distal third of humerus. The fixation has to be individually planned: by one or more bolts, Kirschner needles, plates, etc. The most problematic moment is synthesis to the distal end of humerus, realised by bolts or plates for connection. The latter must be well adapted to the condyles and diaphysic surfaces of the bone. The needles, by the way, can hardly perform satisfactory results.

We applied operations to 39 patients (68,4 per cent). Most often were used bolts and plates (21 patients), rarer Kirschner needles (20 patients) in combination with bolt synthesis. Two patients were treated by serclage in combination with Kirschner needles. To the open fractures a primary surgical treatment was done with reposition and fixation of the fragments. A free skin plastic operation was done to another patient and to third one (with a heavy conquasation after a com-

pression of the ankle between two cars and total tissue damage) an amputation was done.

After operation the ankle joint was immobilized by a plaster for a period of 10—15 days and later active movements began. Some patients were directed to a long-term rehabilitation in a sanatorium. The controlling of the patients for a period of 1—5 years after treatment shew the following results: satisfactory — with 42 patients (74 per cent) and poor — with 15 ones (26 per cent).

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ПЕРЕЛОМЫ НАДМЫЩЕЛКА И МЫЩЕЛКА ПЛЕЧЕВОЙ КИСТИ У ПОЖИЛЫХ ЛЮДЕЙ

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РЕЗЮМЕ

Переломы надмыщелка и мыщелка плечевой кости у пожилых людей являются относительно частыми увреждениями. В работе описаны такие переломы у 57 больных в возрасте от 50 до 70 лет.

Причиной переломов являлись транспортные происшествия, вращающиеся механизмы и придавливание тяжелыми предметами. У двух больных была увреждена брахиальная артерия, что вызвало необходимость в ее восстановлении. У трех больных были прерваны срединный нерв и локтевой нерв, которые были восстановлены первичным швом. Переломы были поливалентного характера, что вызывало трудности при репозиции. Большинство переломов были «Т»- или «У»-образными, 45.5 % из них были в сочетании с переломом лучевой кости на типичном месте, в других случаях были переломы ключицы, таза, костей грудной клетки, черепа, позвоночного столба.

Ручная репозиция была осуществлена лишь в 10,5 % случаев, а в 89 % случаев было проведено оперативное лечение в течение первых 8—12 часов после травмы. Была проведена адаптация суставных поверхностей, репозиция фрагментов, винтовая фиксация или фиксация с помощью пластинок, игл или гвоздей. После операции локтевой сустав иммобилизировался гипсовой шиной на две недели, после чего начиналась реабилитация сустава.

Результаты проведенных операций были следующими: очень хорошие и хорошие — у 42 больных и плохие — у 15 больных.